City of Newport Beach
Water Quality/Coastal Tidelands Committee Minutes

Date: July 10, 2014
Time: 3:00 p.m.
Location: Newport Coast Conference Room, 2nd Floor, Bay E

1. **Welcome/Self Introductions**
   Committee Members present:
   Chairwoman/Council Member Nancy Gardner
   Dennis Baker
   Carl Cassidy
   Lou Denger
   Fred Galluccio
   Mike Henn/Council Member
   George Robertson

   Guests present:
   Jim Mosher, resident
   Nancy and Jack Skinner, S.P.O.N.
   Monica Mazur, resident
   Philip Bettencourt, Bettencourt & Associates
   Mike O'Connell, Irvine Ranch Conservancy
   Jerry A. King, resident
   Jeff Coffman, Clean Green Technology
   Darrel Ferguson, Surfrider Foundation

   Staff present:
   Bob Stein, Assistant City Engineer
   Shane Burckle, Water Conservation Coordinator
   John Kappeler, Water Quality Manager
   Chris Dickel, Public Works Intern
   Adrian Grijalva, Public Works Intern

   The agenda for the Water Quality/Coastal Tidelands Committee was posted at 10:59 am on July 7, 2014, in the binder located in the entrance of the Council Chambers at 100 Civic Center Drive.

2. **Approval of Previous Meeting's Minutes**
   The June 12th meeting minutes were approved with (3) minor corrections.

3. **Old Business**
   a. **Bay and Ocean Bacteriological Test Results**
      Monica Mazur reviewed recent water quality test results within Newport Bay and along the ocean shoreline. She gave a brief presentation on the Natural Resources Defense Council Report entitled "Testing Our Waters."

- The report identified 35 popular beaches around the country as "Superstars" through new data provided by the EPA's Beach Action Value (BAV). Beaches selected did not exceed the previous national standard between 2009-2012 by more than 2% and also did not exceed the EPA's BAV by more than 2% in 2013.
- BAV is inconsistent with California State Law and, according to State Board analysis there will be a posting increase by 50% – 60%.
- May put more bodies of water on the 303d list. EPA stressed the BAV is a recommendation; however that remains to be seen.

b. 2014 Committee Goals and Priorities

John Kappeler updated the Committee on the street sweeping and catch basin cleaning currently being performed by the larger Home Owner Associations (HOAs) in the City.

- There are 164 HOAs in the City and approximately two-thirds of them are public streets and are swept by the City. The remaining one-third are private streets and swept by private communities.
- Newport Coast, One Ford Road and Big Canyon were contacted and asked about their street sweeping programs and at the same time we looked at catch basin cleaning. One Ford Road sweeps weekly. Big Canyon sweeps weekly. All of Newport Coast is swept anywhere from weekly, twice a month or sometimes monthly. Some of the smaller HOAs have not yet responded.
- There are a total of 3,983 catch basins in the City - 3,233 are maintained by the City and approximately 750 are private. The City cleans 100% of their catch basins annually. Only 10 to 20 percent of the HOAs clean their catch basins.
- The City's rate to clean catch basins is $37.50 per catch basin.

ACTION: **Nancy Gardner** directed staff to prepare a report for City Council on the cleaning of private catch basins.

Nancy Gardner asked staff to contact CR&R to see if they have any set dates for household hazardous waste pickup so the City can promote the pickup dates.

4. New Business

a. Case Study in Stakeholder Cooperation: The Creation of the Natural Community Conservation Plan (NCCP)

- **Bob Stein** explained the lack of cooperative arrangements/negotiations with various resource agencies, and because of this, many projects are being stalled for very long periods of time. This lack of ability to connect with different agencies is becoming stressful. There are specific instances when the agencies work together and are successful, most notably in the 1990s during the creation of the NCCP.
- **Michael O'Connell,** from the Irvine Ranch Conservancy, gave the Committee a presentation discussing the formation of the NCCP. The main idea behind the NCCP was a programmatic approach to permitting. The issue that catalyzed the NCCP was the potential listing of the California gnatcatcher under the Endangered Species Act.
- Local government perspective: US Fish and Game got involved with permitting at the local level. Anything closely related to land use decisions was reviewed and in many instances, changed by federal/state governments.

- Environmental perspective: outcomes of permitting did nothing significant – there was no conservation outcome.
- Developer's perspective: this case was the tip of the permitting iceberg, the beginning of something big.
- Consistency and effectiveness of leadership was essential to the success of the NCCP. The more decided up front, the better off things will be.

b. "Arches" Watershed Grant Application

- **Bob Stein** gave a presentation and update on a conceptual Clean Beaches Initiative (CBI) grant application for the "Arches" Watershed Drainage Area. (See attached presentation).
- Regional Board contacted City staff and suggested signing up for a Clean Beaches Initiative grant opportunity for the Arches. Staff completed the application with consultant assistance from ESA and Donna Ferguson.
- The City has a drain outlet at the base of the Arches Bridge. Rain comes down Newport Boulevard and the drainage area is 1 square mile. The city of Costa Mesa occupies 90-95% of this area and Caltrans roadway occupies a small portion. This area is a concern because of many drainage issues. Costa Mesa recently awarded a project in the area to expand their storm drain capacity and create infiltration in the area. This should reduce flows into the Arches drain. Costa Mesa has put up screens in its catch basins.
- John has been working on this for a long time, doing BMPs and looking to coordinate with Costa Mesa. Trash skimmers, 2 CDS units and trash screens have been installed. Staff has done everything except installing a storm drain to sewer diversion. The diversion is the centerpiece of the grant application. This diversion would be right at the paved area next to the Caltrans parking lot. Staff recommends a diversion and tide gates at the Marina. Rough estimated costs are around $500,000.
- Staff will measure at the inlet/outlet of the bioswale and the CDS units. Focus is to conduct a source investigation to find unusual levels of fecal indicator bacteria (FIB) that may be an indicator that we do have a sewage leak or other type of source. Once completed, staff will use molecular source tracking: look for human and/or animal markers, to see if we have any actual sources of sewage coming into the system.

5. Public Comments on Non-Agenda Items

- **Darrel Ferguson** recommends the start of a program to clean up cigarette butts from beaches. Other cities (City of Huntington Beach) have already implemented the program.
- **Jim Mosher** comments on the two aspects of water quality: where water comes from and where water goes too. Wonders how the City is mobilized to address the mandates for conservation from the State. On the wastewater side, at the City Council meeting on Tuesday, City Council approved a document that came out of the Municipal Operations Department, a sewer management plan that was never reviewed by this citizens committee or any other citizens committee. Mr. Mosher is disappointed the plan was not reviewed by citizens to have an opportunity to make comments that may help with a better plan.

6. **Topics for Future Agendas**
   (a) Bacteriological Dry-Weather Runoff Gutter Study (Phase III)
   (b) Prop 84 ASBS Grant Program
   (c) Senate Bill – SB 1447
   (d) Eelgrass Program
   (e) Trash Project for Storm Drains
   (f) Harbor Commission Copper Report
   (g) Orange County Coastal Regional Sediment Management Plan
   (h) Sediment Quality Objectives (SQOs)
   (i) NPDES Fifth Term Draft Permit
   (j) Adopting a Natural Source Exclusion
   (k) Banning Ranch
   (l) Grey Water

7. **Set Next Meeting Date**
   The next meeting date was set for August 14, at 3 PM in the **Newport Coast Conference Room, Bay E, 2nd Floor.**

8. **Adjournment**
   The meeting was adjourned at 4:32 pm.

Chairwoman / Nancy Gardner

Health Care Agency / Environmental Health Newport Bay Bacteriological Monitoring Program
Total Coliform (TC), Fecal Coliform (FC), Enterococci (ENT) Colony Forming Units / 100 ml Sample

ATION	Location Description		2/24/14	3/3/14	3/10/14	3/17/14	3/24/14	3/31/14	4/7/14	4/14/14	4/21/14	4/28/14	5/5/14	5/12/14	5/19/14	5/27/14	6/2/14	6/9/14	6/16/14	6/23/14	6/30/14	7/7/14
WPORT BAY (Upper Bay)				RAIN								RAIN										
NB24	Newport Dunes - Middle	TC	720	4800	>40	>80	>110	10	4400	>320	>170	>740	>20	>95	<10	>280	>30	>50	<10	80	>80	>120
		FC	150	180	20	10	80	<10	390	230	<10	640	<10	10	10	<10	<10	10	<10	<10	<10	<10
		ENT	80	130	20	4	8	4	68	20	2	4	<2	30	2	4	2	6	<2	<2	22	<2
NB24	Newport Dunes - West	TC	580	9800	>150	80	>400	20	>390	>50	>190	3000	70	>80	>60	<10	<10	>120	<10	10	>70	>150
		FC	270	150	40	10	360	<10	190	<10	20	120	10	<10	<10	<10	10	50	<10	<10	50	<10
		ENT	84	130	20	6	10	6	110	46	20	6	2	6	10	<2	<2	10	<2	<2	10	<2
NB24	Newport Dunes - East	TC	>80	>1210	>260	>220	>40	>30	>30	>10	>50	>3000	>70	>10	>10	2200	>50	80	>10	>10	>70	>10
		FC	30	70	170	80	10	10	80	<10	10	460	40	10	<10	160	30	<10	10	<10	10	10
		ENT	24	160	38	32	10	6	10	4	<2	10	10	<2	8	10	236	4	<2	2	4	8
NB24	Newport Dunes - North	TC	>130	3400	>270	>20	>95	>60	10	>10	>10	>5600	<10	>10	>200	20	8800	>20	>10	>60	>20	>50
		FC	<10	200	160	10	10	<10	20	10	10	930	<10	<10	<10	<10	440	<10	>10	50	<10	10
		ENT	10	30	32	4	10	6	48	6	2	6	26	8	<2	4	<2	8	2	10	<2	2
NB25	Vaughn's Launch	TC	NS	NS	NS	20	NS	>30	NS	>10	NS	>220	>330	>20	NS	>20	NS	NS	NS	NS	NS	NS
		FC	NS	NS	NS	<10	NS	10	NS	<10	NS	30	10	<10	NS	<10	NS	NS	NS	NS	NS	NS
		ENT	NS	NS	NS	10	NS	10	NS	2	NS	10	48	2	NS	6	NS	NS	NS	NS	NS	NS
NB26	Ski Zone	TC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		FC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		ENT	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
NB28	North Star Beach	TC	20	6000	>420	>60	>70	60	>20	30	>20	1000	<10	>10	>10	<10	<10	>10	50	>20	>40	>70
		FC	<10	70	40	<10	<10	10	<10	10	<10	70	<10	<10	<10	<10	<10	<10	10	<10	<10	30
		ENT	4	5000	90	56	8	22	2	4	10	10	10	10	<2	8	<2	<2	<2	4	4	2
NB30	De Anza	TC	20	9600	60	10	20	<10	50	30	<10	>210	10	20	>10	<10	>20	>10	10	100	>30	>10
		FC	10	160	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	10	<10
		ENT	8	120	10	<2	<2	<2	2	<2	4	<2	4	<2	<2	4	4	4	<2	20	2	10
NB05	Bayshore Beach	TC	20	7800	20	10	30	110	50	30	<10	50	30	<10	>30	<10	>20	>40	30	<10	<10	40
		FC	<10	140	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10
		ENT	2	94	10	2	8	4	2	2	4	<2	8	<2	2	2	2	2	2	<2	<2	<2
WPORT BAY TRIBUTARIES																						
NBCD	San Diego Creek - Campus Dr.	TC	>1800	>115000	>13000	>2600	>1100	>1800	>2600	>1400	>400	>58000	>1400	>600	>500	>800	>700	>130	>30	<9	200	>1000
		FC	40	3000	>330	80	30	50	30	<10	60	2000	50	10	20	<10	<10	10	>10	<10	10	>50
		ENT	88	4600	293	68	64	64	46	42	74	130	>52	38	20	22	6	10	54	10	8	24
NBSA	Santa Ana Delhi Channel	TC	>2000	>72000	>5400	>770	>4800	>470	>26000	>1400	>400	>97000	>3300	>4100	>2700	>240	>33000	>1400	>3300	>5000	>6500	>920
		FC	40	>900	70	40	>200	140	170	20	60	970	>50	730	60	80	2000	230	>400	>640	1070	>270
		ENT	48	1000	600	44	170	46	170	120	88	130	170	228	230	150	160	400	303	800	800	140
NBBC	Big Canyon Creek	TC	>420	NS	>380	>600	>250	>360	>3200	>460	>100	>440	>460	>760	>650	>4000	>5200	>970	>5600	>4400	>7200	>7000
		FC	20	NS	80	80	10	10	10	130	30	40	250	50	60	20	1040	<10	340	130	60	240
		ENT	100	NS	180	100	92	56	150	190	70	62	120	76	66	76	1000	32	120	120	76	170
NBND	Backbay Drive Pipe	TC	>5800	>410	>780	>5600	>7800	>5000	>3000	>40000	>990	>600	>1100	NS	>1000	NS	NS	NS	NS	NS	NS	NS
		FC	120	40	10	40	190	300	210	>40000	120	10	<10	NS	<10	NS	NS	NS	NS	NS	NS	NS
		ENT	2600	234	74	190	600	232	86	1000	289	1000	1000	NS	8600	NS	NS	NS	NS	NS	NS	NS
WPORT SLOUGH																						
NS01	Lancaster Street &	TC	NS	NS	NS	NS	NS	>19000	<10	>30	>20	>330	>10	>10	>50	>40	>30	<10	>60	>110	>40	NS
	61st Street	FC	NS	NS	NS	NS	NS	200	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	NS
		ENT	NS	NS	NS	NS	NS	86	<2	34	20	44	<2	26	<2	2	4	2	2	26	2	NS
NS02	Lancaster Street &	TC	NS	NS	NS	NS	NS	>10000	>30	10	>10	10	<10	>30	>30	10	<10	<10	<10	>340	>80	NS
	Canal Street	FC	NS	NS	NS	NS	NS	<10	10	10	<10	<10	<10	10	<10	<10	<10	<10	10	160	<10	NS
		ENT	NS	NS	NS	NS	NS	10	4	6	6	10	4	20	8	8	<2	2	6	120	20	NS

Health Care Agency / Environmental Health Newport Bay Bacteriological Monitoring Program
Total Coliform (TC), Fecal Coliform, Enterococcus (ENT) Colony Forming Units / 100 ml Sample

STATION	Location Description		3/3/14	3/10/14	3/17/14	3/24/14	3/31/14	4/7/14	4/14/14	4/21/14	4/28/14	5/5/14	5/12/14	5/19/14	5/27/14	6/2/14	6/9/14	6/16/14	6/23/14	6/30/14	7/7/14
NEWPORT BAY (Lower Bay)			RAIN								RAIN										
BNB09	43rd Street Beach	TC	>1340	190	>30	>110	>10	60	10	10	100	>10	<10	>230	80	>10	<10	<10	>10	>95	>150
		FC	30	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10	<10	<10	<10	<10	<10	<10
		ENT	20	20	2	6	<2	<2	2	6	2	2	2	<2	8	<2	<2	<2	2	4	10
BNB10	38th Street Beach	TC	>720	80	<10	>200	<10	<10	<10	<10	>290	>10	<10	10	100	>20	<10	<10	>20	>150	>50
		FC	<10	<10	<10	10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	80	<10
		ENT	4	28	<2	46	4	10	<2	6	120	4	4	<2	2	20	<2	<2	6	10	36
BNB11	33rd Street Channel	TC	270	>210	10	110	<10	30	>360	80	>60	>40	10	>30	<10	<10	<10	10	>290	>500	>340
		FC	10	20	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10	30
		ENT	4	84	<2	22	2	6	10	<2	64	32	10	<2	<2	<2	2	<2	150	10	20
BNB32	Lido Yacht Club Beach	TC	6000	30	>10	>21600	<10	<10	>10	<10	10	>100	80	<200	<10	<10	190	>20	<10	>170	>95
		FC	50	<10	<10	80	<10	<10	<10	<10	10	<10	50	<10	<10	<10	140	<10	<10	100	<10
		ENT	28	<2	<2	1000	2	<2	2	<2	2	8	<2	2	<2	4	20	34	2	<2	46
BNB07	Via Genoa Beach	TC	8600	<10	<10	10	10	20	30	<10	30	<10	10	<10	10	<10	10	10	<10	>10	20
		FC	10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	10	10	30
		ENT	96	2	<2	<2	2	<2	6	<2	8	<2	<2	2	2	<2	<2	<2	<2	<2	26
BNB35	Newport Blvd. Bridge	TC	880	>8000	>400	>570	80	>6200	10	>95	>70	70	40	>230	>2050	120	1270	>5400	20	>15000	>630
		FC	70	450	<10	95	<10	260	<10	20	20	<10	<10	<10	<10	10	10	1080	<10	6600	170
		ENT	10	226	2	226	<2	251	2	20	<2	6	<2	20	52	4	8	800	2	180	180
BNB12	Rhine Channel	TC	>700	20	10	>350	60	20	<10	10	30	>60	60	20	<10	<10	110	<200	<10	>200	>40
		FC	50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	20	<10
		ENT	<2	<2	<2	20	<2	6	<2	4	10	4	<2	<2	<2	<2	<2	<2	<2	4	<2
BNB14	19th Street Beach	TC	4800	<10	10	10	150	10	<10	<10	10	<10	<10	<10	>10	10	<10	20	<10	40	10
		FC	150	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10
		ENT	20	<2	<2	<2	2	<2	<2	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2
BNB15	15th Street Beach	TC	4600	>440	40	>60	<10	30	10	<10	20	80	10	>180	10	150	10	<10	<10	40	>110
		FC	140	<10	<10	10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	10	<10	<10	<10	30
		ENT	36	26	2	2	4	<2	<2	<2	<2	2	<2	4	<2	<2	<2	8	<2	20	2
BNB17	10th Street Beach	TC	6000	20	10	>20	10	<10	<10	<10	10	<10	<10	<10	<10	10	<10	<10	<10	>10	20
		FC	220	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
		ENT	32	<2	4	2	20	<2	10	<2	2	2	<2	<2	8	<2	<2	<2	2	2	<2
BNB18	Alvarado/ Bay Isle Beach	TC	13000	20	10	<200	10	100	>10	<10	>50	20	<10	>60	10	<10	>10	>10	30	>30	<200
		FC	290	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	20	30	20	<10
		ENT	100	4	10	20	<2	10	10	<2	110	10	2	24	<2	2	4	2	20	<2	<2
BNB22	N Street Beach	TC	920	20	20	50	<10	30	<10	<10	<10	220	<10	30	<10	<10	30	20	<10	30	>20
		FC	10	20	<10	<10	<10	<10	<10	<10	<10	130	<10	<10	<10	<10	20	50	<10	<10	<10
		ENT	2	28	<2	4	<2	4	<2	2	2	54	2	<2	<2	2	<2	4	<2	<2	<2
BNB31	Garnet Avenue Beach	TC	8000	40	190	>70	10	>270	<10	30	150	>30	<10	>20	>10	>20	>20	>80	>40	>10	>30
		FC	180	20	<10	<10	<10	110	20	<10	<10	<10	<10	40	10	<10	10	>70	10	<10	10
		ENT	54	2	38	<2	74	6	10	130	6	58	28	120	4	10	94	26	4	<2	4
BNB03	Ruby Avenue Beach	TC	6600	<10	50	>30	30	<10	10	70	20	10	30	>20	<10	>20	<10	10	<10	<10	>20
		FC	95	<10	<10	10	<10	<10	<10	10	<10	<10	<10	10	<10	<10	<10	30	<10	20	<10
		ENT	32	6	2	10	<2	6	2	<2	2	<2	6	2	<2	2	<2	4	<2	<2	<2
BNB20	Sapphire Avenue Beach	TC	700	>50	>40	120	>100	NS	10	>30	>140	>20	>20	>30	>10	>20	>30	20	>20	>30	>30
		FC	30	<10	10	<10	10	NS	10	20	<10	10	10	20	<10	10	<10	10	<10	10	<10
		ENT	10	10	10	20	4	NS	4	66	24	265	8	350	2	8	8	4	4	2	20
BNB34	Grand Canal	TC	4000	>310	70	460	40	100	>20	320	10	>130	30	>20	100	80	40	80	>30	>30	>110
		FC	100	80	<10	340	60	95	<10	10	<10	70	<10	<10	<10	20	<10	30	<10	50	40
		ENT	22	22	<2	20	2	4	4	<2	<2	2	<2	20	<2	10	<2	46	2	<2	52
BNB21	Abalone Avenue Beach	TC	670	50	>270	>50	>260	10	10	20	40	>200	>120	<10	210	10	80	>30	>40	10	>30
		FC	110	<10	<10	10	<10	<10	<10	20	<10	80	50	<10	60	10	10	10	30	<10	>30
		ENT	20	2	8	20	36	10	<2	2	4	90	34	4	20	<2	2	10	4	2	6
BNB01	Park Avenue Beach	TC	6000	70	20	70	<10	10	80	<10	10	10	<10	>10	<10	10	80	10	10	>20	>240
		FC	95	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10
		ENT	34	10	<2	2	2	<2	<2	2	2	2	2	<2	<2	<2	2	<2	2	<2	10
BNB02	Onyx Avenue Beach	TC	5000	20	<10	>10	10	<10	10	80	30	<10	<10	<10	20	10	>40	>20	>20	30	>10
		FC	100	10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	10	10
		ENT	34	10	2	20	<2	<2	<2	10	<2	2	<2	10	2	10	<2	20	<2	2	<2
BNB29	Promontory Point Channel	TC	800	10	10	>10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	10	<10	>10	30
		FC	20	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
		ENT	8	<2	2	26	<2	2	<2	2	<2	2	<2	4	<2	<2	<2	<2	<2	2	<2
BNB33	Bayside Drive Beach	TC	730	>140	>50	>210	>100	>10	40	>10	8000	>110	>220	>40000	>10	>30	>990	>60	>100	>380	>30
		FC	20	10	<10	50	10	<10	20	<10	7800	<10	95	30	20	30	50	10	30	240	<10
		ENT	<2	10	20	140	10	<2	2	20	3000	54	34	2400	10	38	140	20	26	24	6
BNB23	Rocky Point Beach	TC	>790	30	10	60	380	10	<10	<10	<10	>30	>10	>20	>130	>30	>10	>40	>10	>10	>20
		FC	40	20	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10
		ENT	190	6	6	2	68	2	<2	4	2	4	2	<2	30	<2	2	4	4	<2	8

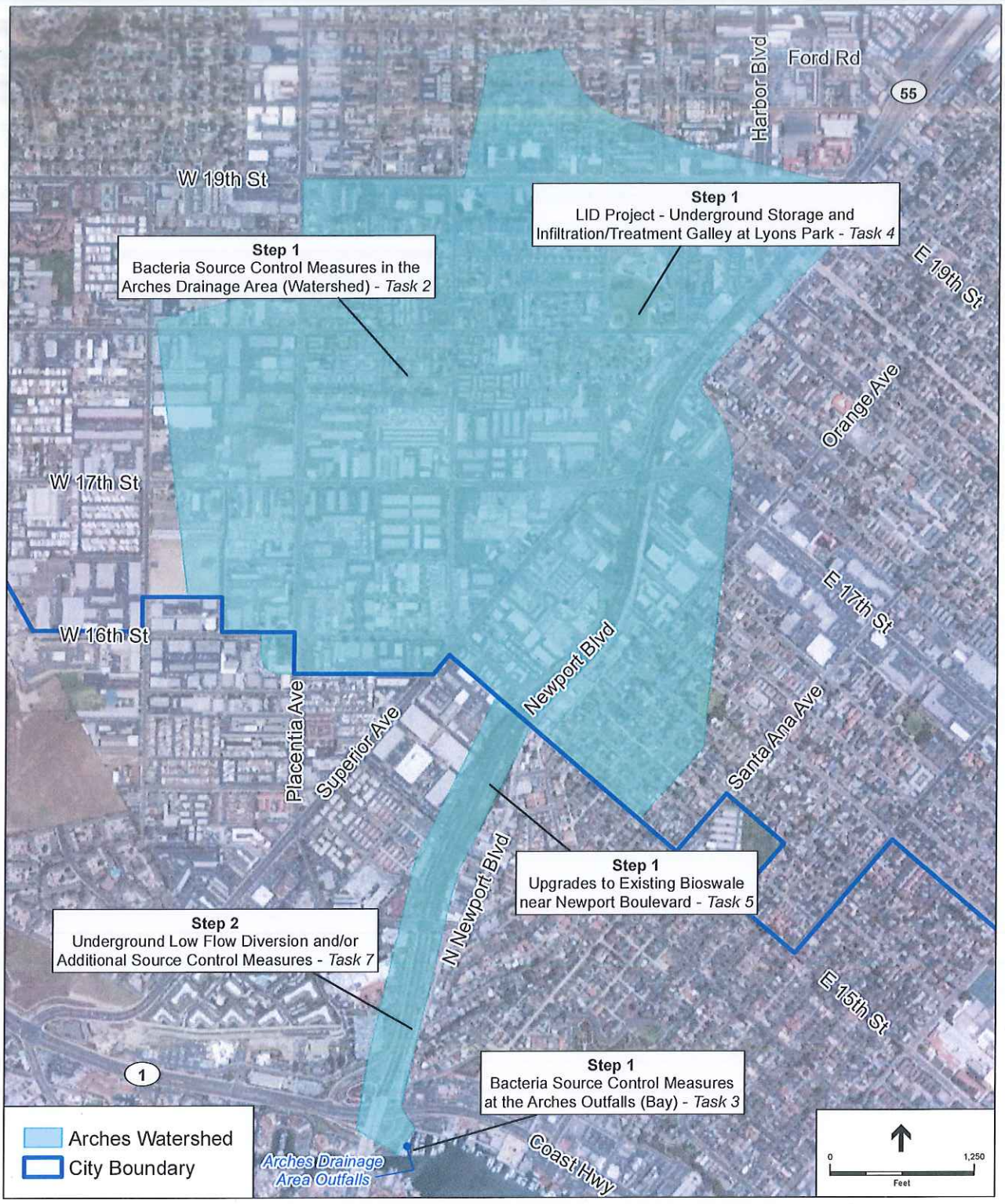
OCSD Bacteriological Ocean Monitoring Program
Total Coliform (TC), Fecal Coliform (FC),
Enterococcus (ENT) Colony Forming Units/100 ml Sample

DATE		2/18	2/19	2/25	2/26	3/4	3/5	3/11	3/12	3/18	3/19	3/25	3/26	4/1	4/2	4/8	4/9	4/15	4/16	4/22	4/23	4/29	4/30	5/6	5/7	5/13	5/14	5/20	5/21	5/27	5/28	6/3	6/4	6/10	6/11	6/17	6/18	6/24	6/25	7/1
ocation/Tide						RAIN	RAIN							RAIN	RAIN																											
olsa Chica	TC	50		<17		270		<17		<17		<17		<17		<17		17		<17		<17		<17		<17		<17		33		<17		17		<17		<17		17
Beach	FC	33		33		<17		17		<17		17		<17		<17		17		<17		<17		<17		<17		17		17		<17		17		17		17		<17
39N	ENT	<2		4		8		<2		<2		2		2		<2		<2		<2		4		<2		<2		2		18		<2		30		<2		8		4
olsa Chica	TC	<17		33		150		17		<17		33		<17		<17		<17		<17		17		<17		17		<17		<17		<17		<17		<17		50		50
Reserve	FC	<17		33		<17		<17		<17		<17		<17		<17		<17		<17		<17		<17		17		33		<17		<17		<17		<17		<17		<17
33N	ENT	2		8		18		2		<2		6		<2		<2		2		4		2		2		4		8		12		<2		6		8		12		12
uffs	TC	17		17		83		33		17		33		<17		<17		<17		<17		17		<17		<17		<17		<17		<17		33		17		17		<17
27N	FC	<17		<17		<17		<17		<17		17		<17		17		17		<17		<17		<17		<17		<17		17		<17		<17		17		17		<17
	ENT	6		118		24		4		6		8		14		2		2		4		6		8		8		2		4		2		8		8		28		<2
th Street	TC	83		33		130		67		50		<17		<17		17		<17		17		33		67		<17		17		33		<17		100		33		17		<17
21N	FC	67		<17		33		50		<17		<17		<17		<17		<17		<17		<17		120		17		<17		33		<17		83		<17		<17		<17
	ENT	38		18		22		48		6		4		12		4		4		<2		2		56		4		12		10		<2		30		18		30		12
acks Snack	TC	33		<17		50		17		<17		17		17		<17		<17		<17		17		17		<17		50		50		<17		83		17		83		17
Bar	FC	17		<17		17		<17		<17		17		33		<17		<17		<17		<17		33		17		<17		50		<17		<17		<17		<17		<17
15N	ENT	6		6		16		4		4		8		4		<2		4		<2		8		<2		2		4		4		<2		40		<2		10		<2
each Blvd.	TC	<17		17		200		<17		<17		17		120		<17		<17		17		<17		<17		50		17		33		17		83		<17		50		17
12N	FC	17		33		17		<17		<17		17		120		<17		<17		<17		50		<17		83		17		33		<17		83		<17		33		33
	ENT	6		10		10		14		4		14		16		<2		4		6		16		6		2		2		16		2		46		<2		62		6
CE Plant	TC	<17	17	<17	180	17	33	<17	33	<17	<17	17	<17	180	67	<17	<17	<17	67	17	33	50	<17	<17	<17	67	33	17	17	<17	33	<17	<17	50	170	<17	<17	50	130	<17
9N	FC	<17	83	<17	150	<17	<17	17	17	<17	<17	<17	33	230	50	<17	<17	<17	33	<17	50	<17	33	<17	<17	120	<17	17	17	<17	17	<17	<17	33	400	<17	<17	33	120	<17
	ENT	4	6	20	82	12	18	2	4	<2	38	12	22	2	2	<2	<2	<2	14	6	12	2	10	6	<2	4	12	2	6	12	8	2	<2	34	68	8	8	32	60	2
agnolia	TC	370	480	67	250	17	67	<17	33	<17	<17	17	380	83	33	17	17	<17	33	<17	17	33	100	<17	<17	100	83	<17	33	83	100	17	17	250	620	<17	17	170	67	33
Street	FC	220	230	33	200	17	17	17	<17	<17	<17	<17	440	50	17	<17	<17	<17	17	<17	33	17	17	<17	<17	200	67	<17	17	67	33	<17	<17	320	440	<17	<17	130	17	<17
6N	ENT	2	334	64	132	4	12	10	10	8	26	12	102	14	8	<2	2	<2	14	8	4	16	>400	2	<2	12	40	<2	20	50	20	<2	<2	54	200	<2	10	58	16	12
rookhurst	TC	33	120	83	480	300	130	400	130	17	280	17	2000	1100	1000	50	150	150	7000	33	50	620	33	<17	<17	350	1600	33	17	<17	17	17	33	<17	<17	17	33	33	17	67
3N	FC	17	67	83	300	200	67	170	83	50	170	<17	1900	1200	1200	<17	170	220	5400	50	170	500	<17	<17	<17	350	920	<17	<17	17	17	17	<17	<17	33	<17	67	17	<17	250
	ENT	102	48	72	192	60	8	54	110	26	26	2	216	>400	16	4	12	40	>400	6	76	182	4	38	18	82	>400	10	8	<2	6	6	6	14	2	4	62	12	10	30
anta Ana	TC	17	83	17	<17	120	170	220	<17	2000	100	120	130	120	600	33	170	<17	100	50	170	<17	50	67	100	<17	33	17	<17	<17	<17	33	17	<17	17	<17	17	<17	17	<17
River Mouth	FC	50	50	33	<17	<17	17	130	17	1500	170	83	400	<100	400	33	170	17	67	33	170	<17	50	17	50	<17	<17	<17	33	<17	<17	17	33	<17	<17	<17	33	<17	<17	<17
0	ENT	6	20	10	4	34	36	38	6	>400	14	28	112	28	26	<2	2	2	48	6	56	2	68	6	6	4	40	<2	4	2	2	8	4	<2	18	<2	8	4	2	<2
range	TC		50		<17		400		67		50		250		CWS		120		17		120		<17		50		17		<17		<17		17			<17		67		<17	
Street	FC		120		<17		17		<17		50		200		CWB		50		100		150		<17		33		<17		<17		<17		<17			17		33		17	
3S	ENT		48		4		34		24		40		104		110		8		26		34		4		18		2		4		2		6			4		28		6	
2nd/53rd	TC		33		<17		200		<17		17		100		CWS		<17		67		33		<17		<17		<17		<17		<17		<17			<17		<17		17	
Street	FC		17		<17		<17		<17		<17		130		11000		<17		17		50		<17		17		<17		<17		<17		<17			<17		<17		<17	
6S	ENT		2		6		84		14		14		58		10		<2		32		16		<2		4		<2		<2		4		2			4		2		4	
8th Street	TC		<17		33		50		67		33		67		280		<17		<17		17		<17		17		<17		<17		<17		<17			33		<17		17	
9S	FC		17		17		<17		17		<17		33		50		<17		<17		<17		<17		17		<17		<17		<17		<17			<17		<17		<17	
	ENT		6		8		50		<2		6		20		8		<2		6		10		<2		6		2		<2		2		<2			2		4		4	
15th/16th	TC		17		<17		17		50		<17		17		17		<17		<17		17		<17		<17		<17		<17		17		<17			<17		17		<17	
Street	FC		<17		<17		17		33		<17		33		67		<17		<17		130		<17		<17		<17		<17		<17		17			<17		<17		<17	
15S	ENT		6		<2		4		2		<2		14		2		<2		8		2		<2		2		2		<2		2		2			2		2		<2	
alboa Pier	TC		<17		<17		33		33		<17		100		33		<17		33		<17		<17		17		<17		<17		<17		67			<17		33		33	
21S	FC		<17		<17		17		17		<17		17		17		<17		17		33		<17		<17		<17		<17		<17		17			<17		<17		17	
	ENT		<2		30		8		<2		<2		38		10		<2		16		4		6		6		<2		2		4		<2			16		<2		16	
he Wedge	TC		<17		<17		17		<17		<17		33		<17		<17		<17		<17		<17		<17		<17		<17		<17		<17			50		<17		17	
27S	FC		<17		<17		33		<17		<17		50		50		<17		<17		200		<17		<17		<17		<17		<17		<17			<17		<17		17	
	ENT		6		4		4		<2		6		32		6		<2		<2		10		<2		<2		<2		2		4		16			2		<2		<2	
orona Del	TC		<17		150		17		<17		17		370		<17		17		200		120		17		370		33		<17		<17		>17			50		17		50	
Mar Beach	FC		<17		83		<17		33		17		540		17		<17		83		200		<17		180		33		<17		<17		<17			67		<17		33	
29S	ENT		<2		54		<2		14		8		44		2		<2		68		56		6		4		12		2		8		<2			76		<2		24	
rystal Cove	TC		<17		<17		17		<17		<17		17		<17		<17		<17		17		<17		<17		<17		<17		17		<17			<17		<17		<17	
39S	FC		<17		<17		17		17		<17		<17		<17		<17		<17		<17		<17		<17		<17		<17		<17		<17			<17		<17		<17	
	ENT		<2		2		2		2		<2		<2		<2		<2		<2		<2		<2		<2		<2		6		2		<2			6		2		2	

Project Update

- Street Sweeping:
  - 164 HOAs – 2/3 have public streets and are swept by the City
  - Remaining 1/3 – we contacted the large associations, i.e. Newport Coast, One Ford Rd and Big Canyon. All have street sweeping programs.

- Catch Basins:
  - Total 3,983 (3,233 City; approx. 750 private)
    - City cleans 100% annually; estimated 10-20% of private are cleaned.



SOURCE: ESRI Imagery

Newport Beach Arches Drainage Bacteria Reduction Program . D140436

Figure 1

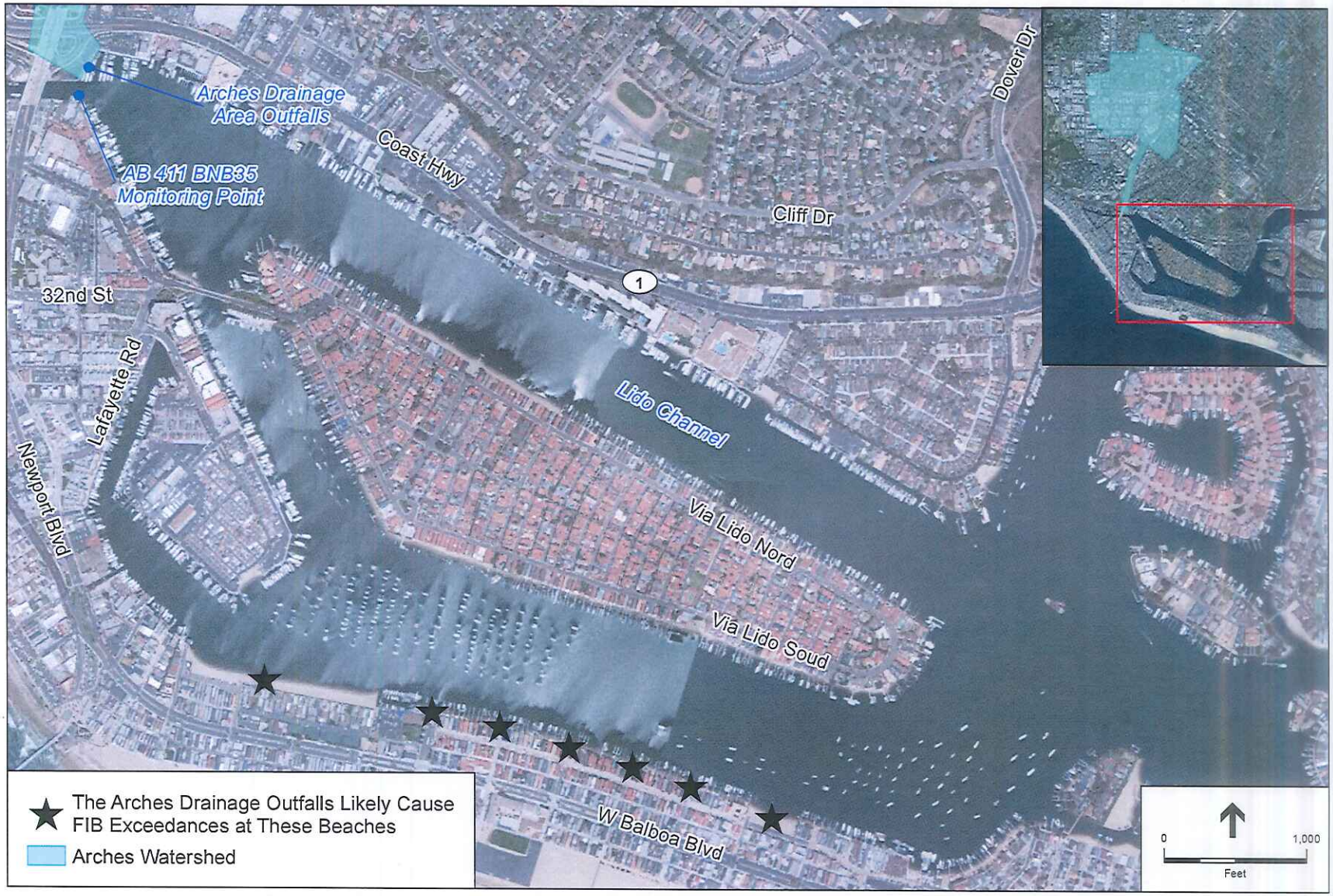
Locations of Proposed Bacteria Reduction Measures

SOURCE: ESRI Imagery

Newport Beach Arches Drainage Bacteria Reduction Program . D140436

Figure 2

Beaches West of Arches Drainage Area Outfalls

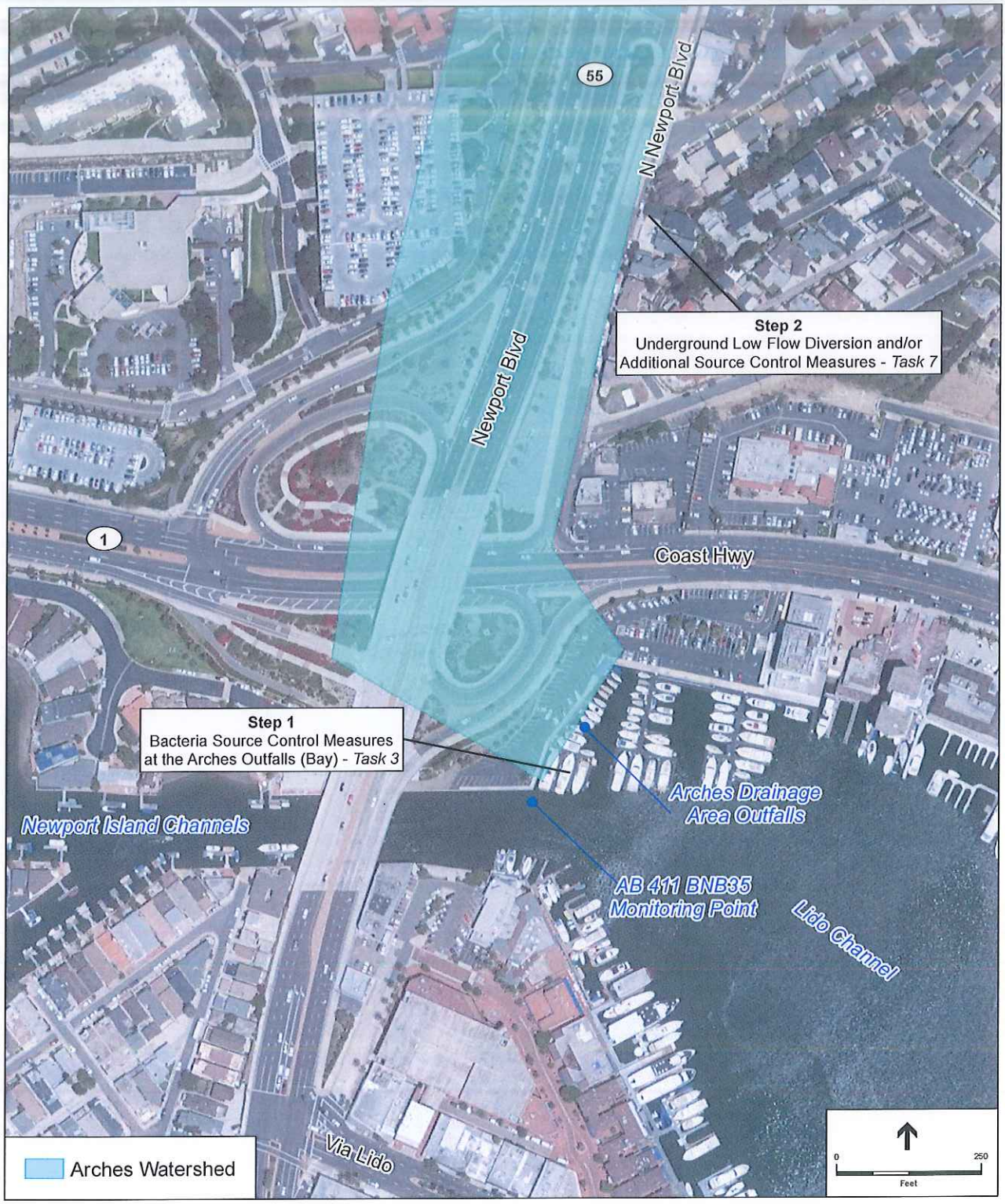


SOURCE: ESRI Imagery

Newport Beach Arches Drainage Bacteria Reduction Program . D140436

Figure 3

Beaches East of Arches Drainage Area Outfalls

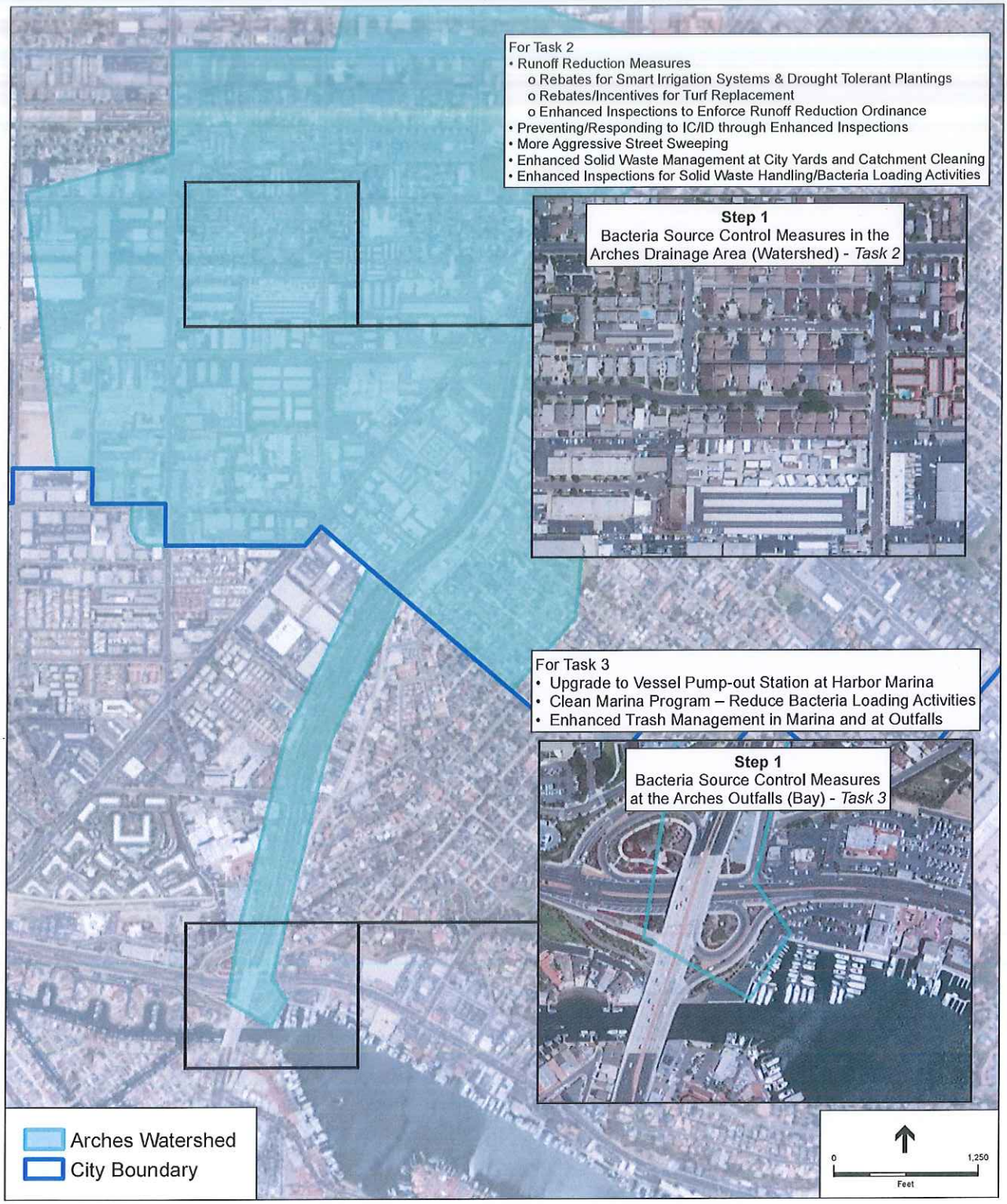


SOURCE: ESRI Imagery

Newport Beach Arches Drainage Bacteria Reduction Program . D140436

Figure 4

AB 411 Monitoring Location



SOURCE: ESRI Imagery

Newport Beach Arches Drainage Bacteria Reduction Program . D140436

Figure 5

Bacteria Source Control Measures Targeted at High Priority Sources